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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/297,399	04/29/1999	MASARU MIYAMOTO	3404/0F546-U	9716

7590

05/20/2003

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 05/20/2003

27

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/297,399

Applicant(s)

MIYAMOTO, MASARU

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6346014 in view of Shay et al. (U.S. 5,478,602), JP 54138732 and Lin (U.S. 5,281,261).

The rejection is adequately set forth in paragraph 3 of the office action mailed 12/4/02, Paper No. 25.

Response to Arguments

3. Applicant's arguments regarding JP 08073787 have been considered but they are moot in view of the discontinuation of this reference against the present claims.

4. Applicant arguments filed 3/4/03 have been fully considered but, with the exception of arguments relating to JP 08073787, they are not persuasive.

Specifically, applicant argues that there is no motivation to combine JP 6346014 with JP 54138732 given that the solution of JP 54138732 is acidic and there is no hint or suggestion that the graft polymerization step of the polymer onto the pigment will occur or be stable in alkaline

medium so that there is no motivation to combine JP 54138732 with ink containing thickener that is associative and swells in alkaline medium.

JP 6346014 disclose water based ink composition for ball-point pens which comprises pigment, polar solvent comprising water and other solvent (such as ethylene glycol), pH controlling agent, and 0.01-10% thickener which swells in an alkaline medium resulting in an increase in viscosity of the ink. However, there is no disclosure of pigment surface treated with a polymer and surfactant as presently claimed.

JP 54138732 discloses pigment surface treated with a resin and surfactant. While it is agreed that application examples 1 and 2 of JP 54138732 disclose producing the pigment in acidic medium, it is noted that application example 3 does in fact disclose producing the pigment in an alkaline solution by adding sodium hydroxide solution and adjusting the pH to 7.5.

Further, it is noted that there is no requirement in the present claims regarding how the pigment is subjected to surface treatment with polymer and surfactant. The claims only require that the pigment is subjected to surface treatment not that such treatment occur in an alkaline medium.

Applicants also argue that there is no disclosure in JP 54138732 of pigment surface treated with both polymer and surfactant. However, it is noted that while JP 5413872 does disclose graft polymerizing polymer onto pigment, the reference also discloses mixing such treated pigment with surfactant (see application examples). It is clear that mixing the treated

pigment with surfactant will result in pigment treated with both polymer and surfactant as presently claimed.

Evidence to support this position is found in Lin which discloses grafting polymer onto pigment followed by mixing this treated pigment with surfactant. Lin discloses that the surfactants coat or adsorb onto the surfaces of the present particles not occupied by polymer. Similarly, given that page 2, lines 13-15 of JP 5413872 disclose that the polymer is grafted to only some of the pigment surface and given that after graft polymerizing the polymer onto the pigment, the pigment is mixed with surfactant, it is clear that the surfactant will adsorb to the non-treated areas of the pigment (as disclosed by Lin) and produce pigment treated with polymer and surfactant as presently claimed. Although in Lin, the surfactant is adsorbed onto the pigment to create electrically charged species, this is just the end result of the specific situation disclosed by Lin. The significance of Lin is its' teaching that mixing polymer grafted pigment with surfactant will result in the pigment adsorbing onto non-treated areas of the pigment. In light of this teaching, it would have been obvious to one of ordinary skill in the art that mixing polymer grafted pigment with surfactant in JP 5413872 will also result in surfactant adsorbing onto the non-treated areas of the pigment and thus producing pigment surface treated with both polymer and surfactant as presently claimed.

Applicants also argue that there is no disclosure of thickener in JP 5413872. However, note that JP 5413872 is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*,

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482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the use of specific surface treated pigments in inks, and in combination with the primary reference, discloses the presently claimed invention.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the

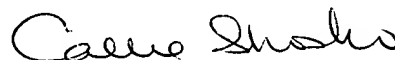
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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Examiner
Art Unit 1714

CS

May 17, 2003